

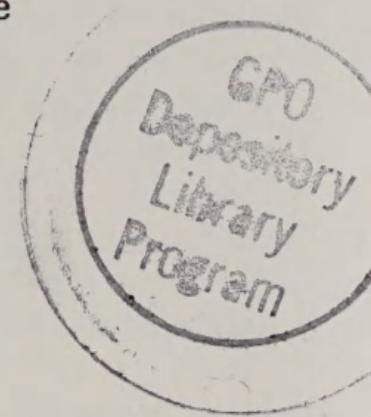
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United States Department of Agriculture

Soil Conservation Service



'McDermand' Ussurian pear

MAR 07 1994



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McDermand Ussurian pear, *Pyrus ussuriensis* Maxim, is a seed propagated cultivar recommended for use in multi-row farmstead and single row field windbreaks, wildlife habitat, and recreational, urban, industrial development and transportation corridor plantings. The vigorous, dense growth makes it useful for windbreaks and screening plantings. The attractive flowers and yellow-orange autumn color enhance its aesthetic value.

McDermand was released in 1990 by the USDA Soil Conservation Service (SCS) in cooperation with the State Agricultural Experiment Stations of North Dakota, South Dakota and Minnesota.



DESCRIPTION

Ussurian pear, also known as Harbin pear or Manchurian pear, is a hardy, medium-sized tree 24 to 40 feet tall, native to northeast Asia. Twigs are yellowish-brown, glabrous; leaves orbicular ovate to ovate, acuminate, rounded or subcordate at base, 2 to 4 inches long, serrate, glabrous, dark yellowish-green above and lighter beneath; petiole, .5 to 2 inches long; flowers white, 1.2 to 1.4 inches in diameter, petals obovate, occur in May; fruit subglobose, short-stalked, greenish-yellow, 1.2 to 1.6 inches in diameter, flesh is hard and not considered edible, ripening in September.

Accession ND-14, PI-478004, was collected by John McDermand, Soil Conservation Service, Bismarck, North Dakota, on the Agriculture Canada Research Station, Morden, Manitoba, Canada, in 1954. The Research Station received the seed from Dr. N.E. Hansen, Horticulture Department, Agricultural Experiment Station, Brookings, South Dakota, in the 1930s. The original seed collection was made by Dr. Hansen near Harbin, Manchuria, in 1924.



ESTABLISHMENT

Eliminate all competing perennial vegetation by cultivating the planting site and keeping it fallow for at least one year before planting. Plant the seedlings in the spring as soon as the ground thaws and soil moisture is high. The recommended within-the-row spacing is 6 to 10 feet.

Plant two-year old seedlings that are 12 to 24 inches in height and have a stem diameter of 3/16 to 1/2 inch just above the root collar. Plant the bare root seedling to the root collar, being sure the roots are well dispersed within the hole. Control weeds by mechanical cultivation or recommended herbicides for a minimum of 5 years.

ADAPTATION

'McDermand' Ussurian pear is well adapted to most soil types except heavy, poorly drained, and high lime soils. It has performed very well on sandy soils with good to excellent weed control and 25 inches of precipitation. The area of adaptation appears to be from the northern limit of hardiness zone 3A southward to hardiness zone 6B. The most limiting factors to survival and growth rates are weed control, animal damage, and soil moisture.

Observations at some North Dakota test locations have shown damage from the bacterial disease fireblight, Erwinia amylovora (Wescott 1950). Susceptibility to the disease appears to be related to stress caused by drought followed by severe winter conditions. The disease can be fatal to seedlings and saplings up to 4 years of age. Older trees exhibit slight symptoms of the disease, but are able to overcome it with little adverse effect.

The results of these studies and others in adjacent states indicate that McDermand Ussurian pear is adapted to North Dakota, South Dakota, Minnesota, Nebraska, Kansas, Missouri, Iowa, Illinois, Michigan, Wisconsin, Indiana, and Ohio. Its performance outside of this area has not been adequately tested.



Area of adaptation of McDermand Ussurian pear

AVAILABILITY

The USDA-SCS Plant Materials Center, P.O. Box 1458, Bismarck, ND 58502, maintains breeder seed and foundation seed of McDermand Ussurian pear. Certified seed (source identified and selected class) is available from growers approved by the North Dakota, South Dakota, and Minnesota State Certified Seed Departments.

For more information on availability and use of McDermand Ussurian pear, contact your local SCS office. All SCS programs and services are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

